Roll No. | | | | | | | | | | | | **Total No. of Pages : 02**

Total No. of Questions : 11

M.Sc (Biotechnology) (Sem.-3)

GENOMICS AND PROTEOMICS

Subject Code : MBT-303

M.Code : 76730

Date of Examination : 23-12-22

Time : 3 Hrs. **Max. Marks : 70**

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SEVEN questions carrying SIX marks each and students have to attempt any FIVE questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. Write briefly :

a) Paralogues

b) Define SAGE

c) cDNA microarrays

d) Isoelectric focusing

e) Peptide mapping

f) Name any two Protein databases

g) Define SNPs

h) Comparative Genomics

i) Principle of Mass spectrometry

j) Transcriptome.

SECTION-B

2. Outline how DNA is sequenced by the Chemical degradation procedure?

3. Explain Genome structure in Prokaryotes.

4. Describe any one method to analyze Protein-Protein interactions.

5. Explain any one technique to determine Single Nucleotide Polymorphisms.

6. Write a short note on Protein digestion.

7. How can we generate a protein expression profile?

8. Discuss briefly the applications of Genomics.

SECTION-C

9. Give the principle of Sanger's sequencing technique. Illustrate the steps involved in sequencing experiment.

10. Explain high throughput proteome analysis with 2D-IEF.

11. Explain the principle and applications of Microarray technology.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.